1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite PL Polyurethane Roof & Flashing Sealant black
IDH number: 1402253 1402254
Product type: Sealant
Region: United States
Company address: Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067
Contact information: Telephone: 800.624.7767
MEDICAL EMERGENCY Phone: Poison Control Center
1-877-671-4608 (toll free) or 1-303-592-1711
TRANSPORT EMERGENCY Phone: CHEMTREC
1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>high viscosity</th>
<th>HEALTH:</th>
<th>*2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Black</td>
<td>FLAMMABILITY:</td>
<td>1</td>
</tr>
<tr>
<td>Odor:</td>
<td>Slight, Solvent</td>
<td>PHYSICAL HAZARD:</td>
<td>1</td>
</tr>
</tbody>
</table>

WARNING: COMBUSTIBLE!
HARMFUL IF INHALED.
CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.

Relevant routes of exposure: Inhalation, Skin, Eyes, Ingestion

Potential Health Effects

Inhalation: This product may cause sensitization by inhalation and skin contact. May cause respiratory tract irritation. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Chronic overexposure to isocyanates has been reported to cause lung damage. Dryness of nasal passages, sore throat, cough, tightness of chest, shortness of breath. Persons suffering from allergic reactions to isocyanates should avoid contact with the product.

Skin contact: Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals. This product may discolor the skin.

Eye contact: Contact with eyes will cause irritation.

Ingestion: Ingestion of this product may cause nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Development of preexisting skin or lung allergy symptoms may increase. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Methyl oleate</td>
<td>112-62-9</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Stoddard solvent</td>
<td>8052-41-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Talc</td>
<td>14807-96-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Propylidynetriethyl trimethacrylate</td>
<td>3290-92-4</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Toluene-2,4-diisocyanate</td>
<td>584-84-9</td>
<td>0 - 0.1</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

- **Inhalation:** If inhaled, immediately remove the affected person to fresh air. Immediate medical treatment necessary.
- **Skin contact:** Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.
- **Eye contact:** In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
- **Ingestion:** Do not induce vomiting, seek medical advice immediately.
- **Notes to physician:** An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate. The physician’s judgment should be used to control symptoms and clinical condition based on the individual reactions of the patient.

5. FIRE FIGHTING MEASURES

- **Flash point:** 85 °C (185°F) Certificate of supplier
- **Autoignition temperature:** None expected.
- **Flammable/Explosive limits - lower:** 0.9 %
- **Flammable/Explosive limits - upper:** 9.5 %
- **Extinguishing media:** Water fog, Foam Carbon dioxide.
- **Special firefighting procedures:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
- **Unusual fire or explosion hazards:** None known
- **Hazardous combustion products:** Nitrous gases Irritating fumes. Isocyanate vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

- **Environmental precautions:** Do not empty into drains / surface water / ground water.
- **Clean-up methods:** Ensure adequate ventilation. Scrape up spilled material and place in a closed container for disposal. Wear suitable protective clothing, gloves and eye/face protection.
7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid extreme temperatures. Wash thoroughly after handling. Protect from moisture. Use only with adequate ventilation.

Storage: For safe storage, store between 18.3 °C (64.9 °F) and 40 °C (104°F) Avoid moisture. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>10 mg/m3 TWA Total dust.</td>
<td>5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Methyl oleate</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA Total dust.</td>
<td>15 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Stoddard solvent</td>
<td>100 ppm TWA</td>
<td>500 ppm (2,900 mg/m3) TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Talc</td>
<td>2 mg/m3 TWA Respirable fraction.</td>
<td>20 MPPCF TWA, 2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Propyldinethyltrimethyl trimethacrylate</td>
<td>None</td>
<td>None</td>
<td>1 mg/m3 TWA (SKIN)</td>
<td>None</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>2 mg/m3 TWA</td>
<td>5 mg/m3 TWA</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>0.025 mg/m3 TWA Respirable fraction.</td>
<td>2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Toluene-2,4-diisocyanate</td>
<td>0.005 ppm TWA 0.02 ppm STEL (Sensitiser.)</td>
<td>0.02 ppm (0.14 mg/m3) Ceiling</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Carbon black</td>
<td>3.5 mg/m3 TWA</td>
<td>3.5 mg/m3 TWA</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.


Eye/face protection: Safety glasses with side-shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: high viscosity
Color: Black
Odor: Slight, Solvent
Odor threshold: Not available
pH: Not available
Vapor pressure: < 4 mm hg (20 °C (68°F))
Boiling point/range: 121.1 - 251.1 °C (250°F - 484°F)
Melting point/ range: Not available
Specific gravity: 1.1805
Vapor density: Heavier than air.
Flash point: 85 °C (185°F) Certificate of supplier
Flammable/Explosive limits - lower: 0.9 %
Flammable/Explosive limits - upper: 9.5 %
Autoignition temperature: None expected.
Evaporation rate: < 0.1 Slower than butyl acetate., (Butyl acetate = 1)
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not available
VOC content: < 4 %; < 44 g/l

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Contact with moisture, other materials that react with isocyanates, or temperatures above 350° F (177° C), may cause polymerization.
Hazardous decomposition products: Irritating and/or toxic fumes and gases may be emitted upon the product’s decomposition. nitrogen oxides Aromatic isocyanates. carbon oxides. carbon monoxide Hydrogen cyanide.
Conditions to avoid: Avoid moisture. Keep away from open flames, hot surfaces and sources of ignition. Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Acute dermal product toxicity: May cause sensitization by skin contact.
Acute inhalation product toxicity: May cause sensitization by inhalation., Danger of serious damage to health by prolonged exposure by inhalation.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Methyl oleate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Stoddard solvent</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Talc</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Propyldynetrimethyl trimethacrylate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Known carcinogen.</td>
<td>Group 1</td>
<td>No</td>
</tr>
<tr>
<td>Toluene-2,4-diisocyanate</td>
<td>Anticipated carcinogen.</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Carbon black</td>
<td>No</td>
<td>Group 2B</td>
<td>No</td>
</tr>
<tr>
<td>Hazardous components</td>
<td>Health Effects/Target Organs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limestone</td>
<td>Nuisance dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methyl oleate</td>
<td>No Target Organs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>Irritant, Respiratory,Some evidence of carcinogenicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stoddard solvent</td>
<td>Irritant, Central nervous system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talc</td>
<td>Irritant, Lung, Some evidence of carcinogenicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propylidynetrimethyl trimethacrylate</td>
<td>Irritant, Allergen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>Irritant, Corrosive, Eyes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartz (SiO2)</td>
<td>Immune system, Lung, Some evidence of carcinogenicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene-2,4-diisocyanate</td>
<td>Allergen, Eyes, Irritant, Lung, Respiratory, Some evidence of carcinogenicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon black</td>
<td>Respiratory, Some evidence of carcinogenicity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: U223: Toluene Diisocyanate.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

International Air Transportation (ICAO/IATA)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

Water Transportation (IMO/IMDG)
- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information
- TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
- CERCLA/SARA 313: None above reporting de minimus
- California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Canada Regulatory Information

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.


16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

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